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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,437	02/04/2004	Yasuo Suda	02975.000139	3357

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EXAMINER

PETERSON, CHRISTOPHER K

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/770,437	Applicant(s) SUDA, YASUO	
	Examiner Christopher K. Peterson	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/21/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on May 21, 2007 has been entered and considered by examiner. Claims 13 - 15 have been cancelled. Claims 1 – 12 and 16 are pending.

Response to Arguments

2. Applicant's arguments filed May 21, 2007 have been fully considered but they are not persuasive.

In regards to claim 1, the Applicant has amended the claim to include the limitation of "...a third state in which the light flux is directed only to the image pickup element...". The applicant argues that the Endo (US Patent Pub. # 2003/0044174) reference does not teach nor suggest a light splitting unit that changes its state among three states (Page 10). The Examiner respectfully disagrees. Specifically, noting the Endo reference does not teach this new limitation, but Sakamoto (US Patent # 6183142) does teaches the ability for the main mirror and the half mirror to move independently (Col. 4, lines 27 – 62). The Examiner believes that Fig. 8 of Sakamoto clearly shows the two mirrors ability to such that in the first state main mirror (50) and sub-mirror (60) are in position "A", in the second state main mirror (50) is in position "B" and sub-mirror (60) is in position "A", and in the third state main mirror (50) and sub-mirror (60) are in position "B".

In regards to claim 16, the applicant argues that the Endo (US Patent Pub. # 2003/0044174) reference does not teach nor suggest CPU 50 and 51 controls the light

quantity adjusting unit (Page 11 - 13). The Examiner respectfully disagrees. Endo teaches a stop with the main mirror and sub-mirror (Para 54 and 84). These items would control the quantity of light flux directed to the image taking apparatus. Para 104 discusses the main operations of the camera in accordance with the second embodiment are the same as those in the flow chart of Fig. 3. The flow chart of Fig. 3 shows the movement of the main mirror (7) in step #318 (Para 85). Microcomputer (21) controls the movement of the mirror and the stop. It also performs other functions within the camera (Para 47). Endo teaches a second embodiment which shows a camera with a replaceable lens. The Examiner believes that the CPU (50 and 51) of the second embodiment performs the same functions as the microcomputer (21) of the first embodiment (Para 104).

Applicant's arguments, see formal objection (page 8), filed May 21, 2007, with respect to paragraphs 82, 109, and 131 have been fully considered and are persuasive. The objection of the specification has been withdrawn.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Endo (US Patent Pub. # 2003/0044174).

As to claim 16, Endo (Fig. 5) teaches a lens apparatus (3) mounted on an image taking apparatus (1) operating in a first mode in which a light flux from an object is

Art Unit: 2622

directed to a view finder optical system (8 -10) and a focus detection unit (SNS1 31) (Para 84) and a second mode in which the light flux is directed to a image pickup element (41) and the focus detection unit (SNS1 31) (Para 85) comprising:

- a communication unit (an interconnection unit between camera CPU 50 and lens CPU 51) which communicates with the image taking apparatus (1) (Para 0102-0103);
- a light quantity adjusting unit (7, 11, 50, and stop) which controls the quantity of the light flux directed to the image taking apparatus (1) (Para 54 and 84). Endo teaches that the main operations of the camera of Fig. 5 are the same as the flow chart of Fig. 3; therefore the CPU (21) of Fig. 1 would perform the same functions of CPU (50 and 51 of Fig. 5).
- a control circuit (CPU 50 and 51) which controls the driving of the light quantity adjusting unit (7, 11, 50, and stop) according to the communication of the communication unit (Para 84 and 85);
- wherein the control circuit (CPU 50 and 51) changes the practice of the control of the light quantity adjusting unit (7, 11, and stop) according to the first mode and the second mode (Para 84 and 85).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1 - 3, and 6 – 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US Patent Pub. # 2003/0044174) in view of Sakamoto (US Patent # 6183142).

As to claim 1, Endo (Fig. 1) teaches an image taking apparatus comprising:

- a light splitting unit (7, 11, and stop) which splits a light flux from an image-taking lens into a plurality of light fluxes (Para 0046);
- a view finder optical system (8-10) configured and positioned to observe an object image formed by the light flux from the image-taking lens (Para 0046);
- an image pickup element (41) which photoelectrically converts the object image to an electrical signal (Para 0055); and
- a focus detection unit (SNS1 31) configured and positioned to detect the focusing state of the image-taking lens according to a phase difference detection system (Para 0052).
- the light splitting unit changes its state among a first state in which the light flux is directed to the view finder optical system (8-10) and the focus detection unit (SNS1 31) (Para 84), a second state in which the light flux is directed to the image pickup element (41) and the focus detection unit (SNS1 31) (Para 85).

Endo does not teach a third state in which the light flux is directed only to the image pickup element. Sakamoto (Fig. 8) teaches the light splitting unit (50 and 60) changes its state among a first state in which the light flux is directed to the view finder

Art Unit: 2622

optical system (2 and 3) and the focus detection unit (4), a second state in which the light flux is directed to the image pickup element (6) and the focus detection unit (4), and a third state in which the light flux is directed only to the image pickup element (6)(Col. 4, lines 27 – 62). The mirrors rotate independently of each other, in the first state main mirror (50) and sub-mirror (60) are in position “A” and in the second state main mirror (50) is in position “B” and sub-mirror (60) is in position “A”.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided first and second mirrors that operate independently of each other as taught by Sakamoto to the apparatus of Endo, because it eliminates adjustment cost reduction, adjustment component elimination, adjustment component space reduction, and simplifies the rotational movement (Col. 7, line 11 – 30 of Sakamoto).

As to claim 2, Endo teaches the image taking apparatus (1) according to claim 1, further comprising: an image display unit (46) which displays image data acquired using the image pickup element (41); and a control circuit (44) which controls the driving of the image display unit (Para 0057), wherein the control circuit (44) causes the image display unit (46) to display the image data when the light splitting unit (7 and 11) is in the second state (Para 0113).

As to claim 3, Endo teaches the image taking apparatus (1) according to claim 2, wherein the control circuit (44) causes the image display unit (46) to display only a part of the image data when the light splitting unit is in the second state (Para 0058 and 0085).

As to claim 6, Endo teaches the image taking apparatus (1) according to claim 1, further comprising: a control circuit (44) which determines the focusing state of the image-taking lens based on the output of the focus detection unit (SNS1 31), wherein the control circuit (44) changes the determination of the focusing state according to the first state and the second state (Para 0122 - 0123).

As to claim 7, Endo teaches the image taking apparatus (1) according to claim 6, wherein the control circuit (44) determines the focusing state by correcting the output of the focus detection unit (SNS1 31) based on an initial phase difference and changes the value of the initial phase difference according to the first state and the second state (Para 0108).

As to claims 8 and 9, these claims are cite same limitations as claim 1; therefore claims 8 and 9 are analyzed as previously discussed with respect to claim 1.

As to claim 10, Sakamoto teaches the image taking apparatus according to claim 8, wherein when changing from one state to the other between the first state and the second state, the light splitting unit (50 and 60) is placed in the third state in which the first mirror (50) and the second mirror (60) are withdrawn from an image-taking optical path (Col. 4, line 38 – 50). In the third state main mirror (50) and sub-mirror (60) are in position "B".

As to claim 11, Sakamoto (Fig. 8) teaches the image taking apparatus according to claim 8, further comprising: a stopper member (52a) which contacts the first mirror for positioning the first mirror in the first state, wherein the stopper member (52a) can move with respect to a moving track of the first mirror (Col. 5, lines 40 - 49).

As to claim 12, Endo teaches the image taking apparatus (1) according to claim 1, wherein the image-taking lens (3) is attachable and detachable to the image taking apparatus (Para 0100 - 0101).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US Patent Pub. # 2003/0044174) in view of Sakamoto (US Patent # 6183142) as applied to claim 1 above, and further in view of Mukai (US Patent # 5489965).

As to claim 4, note the discussion of Endo and Sakamoto above, Endo and Sakamoto do not teach an information display unit which displays information within the field of view of the view finder optical system; and a control circuit which controls the driving of the information display unit, wherein the control circuit does not drive the information display unit when the light splitting unit is in the second state.

Mukai (Fig. 11) teaches an information display unit (302) which displays information within the field of view of a view finder (5); and a control circuit (Col. 4, line 13-22) which controls the driving of the information display unit, wherein the control circuit (Col. 4, line 13-22) does not drive the information display unit when the light splitting unit is in the second state (Col. 4, line 3-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided an information display unit (302) which displays information within the field of view of a view finder (5) as taught by Mukai to the apparatus of Endo and Sakamoto, because it would be convenient for the user looking through the view finder (Col. 1, line 14 - 37 of Mukai).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US Patent Pub. # 2003/0044174) in view of Sakamoto (US Patent # 6183142) as applied to claim 1 above, and further in view of Fuchimukai (US Patent Pub. # 2002/0075394).

As to claim 5, note the discussion of Endo and Sakamoto above, Endo and Sakamoto do not teach a light-blocking member which moves with respect to the optical path of the view finder optical system; and a control circuit which controls the driving of the light-blocking member, wherein the control circuit causes the light-blocking member to be inserted into the optical path of the view finder optical system when the light splitting unit is in the second state

Fuchimukai (Fig. 6) teaches the image taking apparatus according to claim 1, further comprising: a light-blocking member (92A) which moves with respect to the optical path of the view finder optical system (40); and a control circuit which controls the driving of the light-blocking member (92A), wherein the control circuit (Para 0065) causes the light-blocking member (92A) to be inserted into the optical path of the view finder optical system when the light splitting unit is in the second state (Para 0063 - 0066 of Fuchimukai).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a light-blocking member which moves with respect to the optical path of the view finder optical system as taught by Fuchimukai to the apparatus of Endo and Sakamoto, because it prevents light entering the eyepiece from reaching the CCD (Para 0063 of Fuchimukai).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kaneda (US Patent # 6992720) cites an optical apparatus including image pick-up device and interchangeable lens with controller for controlling change of aperture.

Ohkawara (US Patent # 6683652) cites an interchangeable lens video camera system having improved focusing.

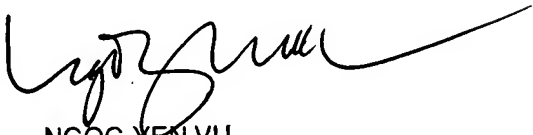
Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher K. Peterson whose telephone number is 571-270-1704. The examiner can normally be reached on Monday - Friday 6:30 - 4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CKP
25 July 2007


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER